

REMARKS

Applicants' undersigned attorney thanks the Examiner for her comments. Applicants respectfully request reconsideration of this patent application, particularly in view of the above Amendment and the following remarks. Currently, Claims 1-40 are pending.

The present invention is directed to pant-like absorbent garments having side panels that are releasably attached to a chassis portion of the garment such that the side panels can be unfastened from the garment, refastened to the garment, and removed from the garment altogether. The side panels, along with the chassis, define a waist opening and a pair of leg openings. The side panels include a linear waist edge and a leg edge at least a portion of which is curved to allow the leg opening to conform about a wearer's leg. The resulting absorbent garments have refastenable side seams and can be easily fitted to and removed from a wearer without complete removal of a wearer's clothing.

Amendment to the Specification

The specification has been amended at page 18, line 12; page 21, line 5; page 22, lines 15-16; page 23, line 20; and page 27, line 17 to remove the trademark symbol after the words LYCRA, ECOFLEX, AHCovel, GLUCOPON, GOHSENOL and REXTAC, respectively.

The specification has been amended at page 22, lines 15-16 to include the generic descriptor "surfactant" after the terms AHCovel N-62 and GLUCOPON 220UP.

The specification has been amended at page 23, line 5 to include the company name "Chisso" in lower case letters with only the first letter capitalized.

The specification has been amended at page 31, lines 10-11, to assign element number 100 to the "tearable, non-refastenable seam" as "shown in Fig. 8".

No new matter has been added by way of this amendment. Marked-up versions of the amended paragraphs are included at the end of this document.

Amendment to the Drawings

Approval of the proposed drawing corrections filed on 24 September 2002 has been noted by Applicants. In conformity therewith, corrected drawings for Figs. 1, 2 and 8 are included at the end of this document.

Corrected Fig. 8 has been further amended to be consistent with the description at page 31, lines 10-13, which also supports the invention as set forth in Claim 39. Corrected Fig. 8 has been amended to show a side panel 34, attached to the chassis 32, and including a tearable, non-refastenable seam 100 indicated by a dashed line running longitudinally from waist end edge 72 to leg end edge 70. The revisions to corrected Fig. 8 are marked in red on the amended figure.

No new matter has been added in this amendment. Corrected Figs. 1 and 2, and amended Fig. 8 are included at the end of this document.

Amendment to the Claims

Claims 1-40 have been examined with no claims being allowed. Amended Claims 1, 16, 21 and 34 are included herein. Marked-up versions of amended Claims 1, 16, 21 and 34 are included at the end of this document. No new matter has been added by way of this amendment.

Applicants have amended Claims 1, 21 and 34 to clarify that each of the first and second side panels include a linear waist edge and a leg edge at least a portion of which is curved. Support for this amendment is found at page 29, lines 16-19 of the specification and in Figs. 4-7.

Applicants have amended Claim 16 pursuant to the Examiner's suggestion at paragraph 4 of the Office Action.

Drawing Objections

The objection to the drawings under 37 CFR 1.83(a) with respect to Claims 17, 19-20 and 39 is respectfully traversed. More particularly, 37 CFR 1.83(a) requires that "[t]he drawing in a nonprovisional application must show every feature of the invention specified in the claims." Fig. 8 has been amended to show every feature specified in Claim 39, as described above.

Claims 17 and 19-20 recite a diaper, an adult incontinence garment, and swim wear, respectively, having all of the features of the garment recited in Claim 1. The structure of these types of garments is no different than what is illustrated in Figs. 1-15. The specification discloses these various types of garments and states that the description will be in terms of a training pant merely for ease of explanation. Since every feature of the invention specified in Claims 17 and 19-20 is shown in Figs. 1-15, Applicants respectfully request withdrawal of this objection.

Claim Rejections - 35 USC §102

The rejection of Claims 1, 9-12, 17, and 19-20 under 35 USC §102(b) as being anticipated by U.S. Patent 4,315,508 to Bolick (Bolick '508) is respectfully traversed.

Bolick '508 discloses a combination of absorbent garment and suspension system. The suspension system includes a pair of rectangular elastic straps having fastening devices provided on the ends of the straps that are intended to cooperate with fastening devices in the garment material to connect a front waist panel of the garment to a back waist panel of the garment.

For a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Bolick '508 does not disclose each and every element or limitation of amended Claim 1. Applicants' invention as claimed in amended independent Claim 1 requires each of the first and second side panels to have a linear waist edge and a leg edge at least a portion of which is curved. Such curvature allows the leg opening formed by the combination of the side panels and the chassis to conform about the wearer's leg.

Bolick '508 does not disclose a strap having a leg edge at least a portion of which is curved. As can be seen in Figs. 1-4 of Bolick '508, the straps have a generally rectangular shape wherein both the waist edge of the strap and the leg edge of the strap are linear and substantially parallel to each other.

For at least the reasons presented above, Applicants respectfully submit that amended Claim 1 is not anticipated by Bolick '508. Because Claims 9-12, 17 and 19-20 depend from Claim 1, these claims are also not anticipated by Bolick '508. Thus, Applicants respectfully request withdrawal of this rejection.

The rejection of Claims 1, 2, 5-11, 14-21, 23, 25, 27, 29, 30, 34, and 36-39 under 35 USC §102(b) as being anticipated by U.S. Patent 5,304,162 to Kuen (Kuen '162) is respectfully traversed.

Similar to Bolick '508, Kuen '162 also discloses a fastening system for absorbent articles that includes a pair of strap members that connect a front waist region of a garment to a back waist region of the garment. More particularly, the strap members are generally rectangular in shape.

As mentioned above, for a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Kuen '162 does not disclose each and every element of amended Claims 1, 21, and 34. Applicants' invention as claimed in amended independent Claims 1, 21, and 34 requires each of the first and second side panels to have a linear waist edge and a leg edge at least a portion of which is curved. Such curvature allows the leg opening formed by the combination of the side panels and the chassis to conform about the wearer's leg.

As can be seen in Figs. 1 and 3 of Kuen '162, the strap members have a generally rectangular shape wherein both the waist edge of the strap and the leg edge of the strap are linear and substantially parallel to each other. Kuen '162 does not disclose that at least a portion of the leg edge of the strap member be curved to allow the strap member to conform about the wearer's leg.

With respect to Applicants' Claim 39, the Examiner cites Col. 6, line 38 – Col. 7, line 6, of Kuen '162 as an example of a tearable, non-refastenable seam. However, rather than a tearable, non-refastenable seam, Kuen '162 discloses pleated material attached to itself with releasable bonds. The releasable bonds can be broken to lengthen the strap, while the strap material itself remains intact whether the bonds are intact or broken. In contrast, the tearable, non-refastenable seam of Claim 39 is a seam in which the material of the side panel itself can be torn to facilitate removal of the garment from a wearer, as described in further detail at page 31, lines 10-13. Thus, Kuen '162 does not teach a tearable, non-refastenable seam.

For at least the reasons above, Applicants respectfully submit that amended Claims 1, 21 and 34 are not anticipated by Kuen '162. Because Claims 2, 5-11, and 14-20 depend from Claim 1, Claims 23, 25, 27, 29 and 30 depend from Claim 21, and Claims 36-39 depend from Claim 34, these claims are also not anticipated by Kuen '162. Thus, Applicants respectfully request withdrawal of this rejection.

Claim Rejections - 35 USC §103

The rejection of Claims 13, 31-33 and 40 under 35 USC §103(a) as being unpatentable over U.S. Patent 5,304,162 to Kuen (Kuen '162) in view of U.S. Patent 5,509,913 to Yeo and U.S. Patent 4,944,734 to Wallach is respectfully traversed.

Claims 13, 31-33, and 40 are each directed to flushable parts of the chassis of the garment of the invention. Yeo and Wallach each disclose flushable or biodegradable compositions, with Wallach teaching the use of such materials in absorbent garments. However, neither Kuen '162, Yeo, nor Wallach discloses or suggests the structure of Applicants' claimed garment. More particularly, neither Kuen 162, Yeo, nor Wallach discloses or suggests a garment having removable side panels that have a leg edge at least a portion of which is curved to allow the leg opening to conform about a wearer's leg. Therefore, the combined disclosures of Kuen '162, Yeo, and Wallach fail to disclose or suggest a garment having flushable chassis elements in combination with releasably connected side panels having a leg edge at least a portion of which is curved.

For at least the reasons given above, Applicants respectfully submit that the disclosures of Kuen '162 in view of Yeo and Wallach fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

The rejection of Claims 3 and 35 under 35 USC §103(a) as being unpatentable over U.S. Patent 5,304,162 to Kuen (Kuen '162) in view of U.S. Patent 5,423,789 (Kuen '789) is respectfully traversed.

Claims 3 and 35 both recite that each of the fastening components comprises a loop material and each mating fastening component comprises a hook material. Similar to Kuen '162, Kuen '789 discloses a garment including strap members that connect a front waist region of the garment to a back waist region of the garment. As shown in Figs. 1 and 3 of Kuen '789, the strap members have a generally rectangular shape wherein both the waist edge of the strap and the leg edge of the strap are linear and substantially parallel to each other. Neither Kuen '162 nor Kuen '789 discloses or suggests the structure of Applicants' claimed garment. More particularly, neither Kuen '162 nor Kuen '789 discloses or suggests a garment having removable side panels that have a linear waist edge and a leg edge at least a portion of which is curved to allow the leg opening to conform about a wearer's leg. Therefore, the combined disclosures of Kuen '162 and Kuen '789 fail to disclose or suggest a garment having fastening components comprising loop material and mating fastening

components comprising hook material in combination with releasable connected side panels having a linear waist edge and a leg edge at least a portion of which is curved.

For at least the reasons given above, Applicants respectfully submit that the disclosure of Kuen '162 in view of Kuen '789 fail to disclose or suggest Applicants' claimed invention. Thus, Applicants respectfully request withdrawal of this rejection.

The rejection of Claim 4 under 35 USC §103(a) as being unpatentable over U.S. Patent 5,304,162 to Kuen (Kuen '162) in view of U.S. Patent 5,669,901 to LaFortune et al. (LaFortune) is respectfully traversed.

Claim 4 is directed to a garment including two fastening components and two mating fastening components each comprising hook material, and two fastening components and two mating fastening components each comprising loop material. Similar to Kuen '162, LaFortune discloses a garment including a pair of strap members that connect a front waist region of the garment to a back waist region of the garment. As shown in Figs. 1 and 6 of LaFortune, the strap members have a generally rectangular shape wherein both the waist edge of the strap and the leg edge of the strap are linear and substantially parallel to each other. However, neither Kuen '162 nor LaFortune discloses or suggests the structure of Applicants' invention, particularly, that each side panel includes a linear waist edge and a leg edge at least a portion of which is curved to allow the leg opening to conform about a wearer's leg. Therefore, the combined disclosures of Kuen '162 and LaFortune fail to disclose or suggest a garment including two fastening components and two mating fastening components each comprising a hook material, and two fastening components and two mating fastening components each comprising a loop material, in combination with releasably attached side panels having a linear waist edge a leg edge at least a portion of which is curved.

For at least the reasons given above, Applicants respectfully submit that the teachings of Kuen '162 in view of LaFortune fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

The rejection of Claims 22, 24, 26 and 28 under 35 USC §103(a) as being unpatentable over U.S. Patent 5,304,162 to Kuen (Kuen '162) in view of U.S. Patent 5,549,593 to Ygge et al. is respectfully traversed.

Claims 22, 24, 26, and 28 are each directed to absorbent garments having a fastening material on an inner surface of the chassis and a mating fastening material on an outer surface of the releasably attached side panels. Ygge shows an absorbent garment having fastening material on either an inner surface or an outer surface with a corresponding waist belt having mating fastening material on either an inner surface or an outer surface. However, neither Kuen '162 nor Ygge discloses or suggests the structure of Applicants' claimed garment. More particularly, neither Kuen '162 nor Ygge discloses or suggests a garment having removable side panels that extend from a waist opening to a leg opening with a linear waist edge and a leg edge at least a portion of which is curved to allow the leg opening to conform about a wearer's leg. Therefore, the combined disclosures of Kuen '162 and Ygge fail to disclose or suggest a garment having a fastening material on an inner surface of a chassis and a mating fastening material on an outer surface of a pair of releasably attached side panels, the side panels having a linear waist edge and a leg edge at least a portion of which is curved.

For at least the reasons given above, Applicants respectfully submit that the disclosures of Kuen '162 in view of Ygge fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

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Conclusion

Applicants believe that this case is now in condition for allowance. If the Examiner feels that any issues remain, then Applicants' undersigned attorney would like to discuss the case with the Examiner. The undersigned can be reached at (847) 490-1400.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE SPECIFICATION:**

At page 18, lines 3-13:

--The flap elastic members 53, the waist elastic members 54 and 56, and the leg elastic members 58 can be formed of any suitable elastic material. As is well known to those skilled in the art, suitable elastic materials include sheets, strands or ribbons of natural rubber, synthetic rubber, or thermoplastic elastomeric polymers. The elastic materials can be stretched and adhered to a substrate, adhered to a gathered substrate, or adhered to a substrate and then elasticized or shrunk, for example with the application of heat; such that elastic constrictive forces are imparted to the substrate. In one particular embodiment, for example, the leg elastic members 58 include a plurality of dry-spun coalesced multifilament spandex elastomeric threads sold under the trade name LYCRA[®] and available from E.I. DuPont de Nemours and Company, Wilmington, Delaware, U.S.A.--

At page 20, line 18 – page 21, line 10:

-- The outer cover 40 can, alternatively, include breathable microporous films and laminates made out of biodegradable polymers, made using techniques known in the art. Biodegradable films may also possess properties required in flushable materials. Examples of suitable film-forming biodegradable matrix polymers include, without limitation, polylactic acid polymers (especially homopolymers); polyesters of butanediol, adipic acid, succinic acid and/or terephthalic acid; polycaprolactone polymers; and combinations thereof. An especially suitable polymer is a terpolymer of terephthalic acid, adipic acid and 1,4-butanediol, sold by BASF Corporation under the name ECOFLEX[®]. Filler particles used to make breathable, microporous, biodegradable films may desirably be biodegradable filler particles. Suitable biodegradable filler particles include cyclodextrin. The term "cyclodextrin" includes cyclodextrin compounds and their derivatives which retain the cyclodextrin ring-like structure in all or part of their molecular configurations. --

At page 22, line 4 – page 24, line 6:

-- The bodyside liner 42 can be manufactured from a wide selection of web materials, such as synthetic fibers (for example, polyester or polypropylene fibers), natural fibers (for example, wood or cotton fibers), a combination of natural and synthetic fibers, porous foams, reticulated foams, apertured plastic films, or the like. Various woven and nonwoven fabrics can be used for the bodyside liner 42. For example, the bodyside liner can be composed of a meltblown or spunbonded web of polyolefin fibers. The bodyside liner can also be a bonded-carded web composed of natural and/or synthetic fibers. The bodyside liner can be composed of a substantially hydrophobic material, and the hydrophobic material can, optionally, be treated with a surfactant or otherwise processed to impart a desired level of wettability and hydrophilicity. For example, the material can be surface treated with about 0.45 weight percent of a surfactant mixture including AHCOVEL[®] N-62 surfactant from Uniqema, Inc., a division of ICI of New Castle, Delaware, and GLUCOPON[®] 220UP surfactant from Cognis Corp. of Ambler, Pennsylvania, in an active ratio of 3:1. The surfactant can be applied by any conventional means, such as spraying, printing, brush coating or the like. The surfactant can be applied to the entire bodyside liner 42 or can be selectively applied to particular sections of the bodyside liner, such as the medial section along the longitudinal centerline.

A suitable liquid permeable bodyside liner 42 is a nonwoven bicomponent web having a basis weight of about 27 gsm. The nonwoven bicomponent can be a spunbond bicomponent web, or a bonded carded bicomponent web. Suitable bicomponent staple fibers include a polyethylene/polypropylene bicomponent fiber available from Chisso [CHISSO] Corporation, Osaka, Japan. In this particular bicomponent fiber, the polypropylene forms the core and the polyethylene forms the sheath of the fiber. Other fiber orientations are possible, such as multi-lobe, side-by-side, end-to-end, or the like. While the outer cover 40 and bodyside liner 42 can include elastomeric materials, it can be desirable in some embodiments for the composite structure to be generally inelastic, where the outer cover, the bodyside liner and the absorbent assembly include materials that are generally not elastomeric.

Alternatively, the body side liner 42 can include a urine-insoluble, water-soluble material, thereby rendering the body side liner 42 flushable. One example of such a material is a temperature-dependent, urine-insoluble, water-soluble material as described in U.S. Patent No. 5,509,913 issued to Richard Yeo, incorporated herein by reference. The material can suitably include any of the following polymers: polyvinyl methyl ether, polyethyl oxazoline, polyvinyl pyrrolidone, hydroxypropyl cellulose, and polyvinyl alcohol having a percent hydrolysis of less than about 75%. A preferred polymer is polyvinyl alcohol, available under the trade name GOHSENOL[®] from Nippon Synthetic Chemical Industry Co., Ltd., of Osaka, Japan, with suitable grades including KZ-06, LL-02, and KH-17. Any of these polymers can be used in combination with a sulfate, citrate, phosphate, or chromate salt anion to make the polymer insoluble in body fluids above 25 degrees Celsius but soluble in tap water below 25 degrees Celsius. Thus, when the garment 20 is worn the garment remains intact, but when the chassis 32 is flushed down a toilet, the urine-insoluble, water-soluble material dissipates. This solubility temperature can be adjusted chemically. --

At page 27, lines 10-17:

-- In the case of a discontinuous coating of the barrier material, the spaces between the coating spots must be close enough that water is precluded by capillary forces from flowing between the spots out of the underlying substrate. Desirably, the barrier coating is a polyalphaolefin having a melt viscosity of about 400 to about 10,000 cps at 190 degrees Celsius. Suitable polymers include, but are not limited to, low molecular weight, amorphous ethylene-propylene copolymers. Particularly suitable polymers are manufactured by the U.S. Rexene Company under the tradename REXTAC[®]. --

At page 31, lines 6 – 13:

-- In an alternative embodiment of the invention, the side panels 34 can include a wipe material, or material that renders the side panels 34 suitable for use as wipes. Thus, when a care giver changes a wearer's disposable absorbent garment, the side panels 34 can be used as wipes rather than requiring a separate package of wipes. In yet another alternative embodiment of the invention, shown in Fig. 8, the side panels 34 can each include at least one tearable, non-refastenable seam 100 running longitudinally along the length of the side panels 34 such that the garment 20 can be removed from a wearer by tearing along the seam to loosen the fit of the garment. --

VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE CLAIMS:**

1. (Twice Amended) An absorbent garment comprising:
a chassis including a front panel and a back panel;

first and second side panels, each having a linear waist edge, a leg edge at least a portion of which is curved, and an average length dimension measured parallel to a longitudinal axis that is at least 20 percent of an overall length dimension of the chassis measured parallel to the longitudinal axis, each of the side panels being releasably connected to the front and back panels, and defining with the chassis a

Amended 5-16-03 waist opening and first and second leg opening;

wherein the first side panel includes first and second fastening components, the second side panel includes third and fourth fastening components, the front panel includes first and third mating fastening components engageable with the first and third fastening components, and the back panel includes second and fourth mating fastening components engageable with the second and fourth fastening components.

16. (Amended) The absorbent garment of Claim 14, wherein said at least two pieces of material include a first non-elastomeric piece of material [is] bonded to a second elastomeric piece of material and a third non-elastomeric piece of material [is] bonded to the second elastomeric piece of material.

21. (Twice Amended) An absorbent garment comprising:

an absorbent chassis including a front panel and a back panel;

Amended 5-16-03 first and second elastomeric side panels releasably connected to the front and back panels and defining with the chassis a waist opening and first and second leg openings, each of the first and second side panels having a linear waist edge, a leg edge at least a portion of which is curved, and an average length dimension measured parallel to a longitudinal axis that is at least 20 percent of an overall length dimension of the chassis measured parallel to the longitudinal axis;

a first refastenable seam extending from the waist opening to the first leg opening between the first side panel and the front panel;

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a second refastenable seam extending from ^{the} a waist opening to the first leg opening between the first side panel and the back panel;

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a third refastenable seam extending from ^{the} a waist opening to the second leg opening between the second side panel and the front panel; and

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a fourth refastenable seam extending from ^{the} a waist opening to the second leg opening between the second side panel and the back panel.

34. (Twice Amended) An absorbent garment comprising:

a chassis including a front panel and a back panel, the front and back panels each having at least two fastening components bonded thereon, and partially defining a waist opening and first and second leg openings;

a first side panel including a substrate and at least two mating fastening components extending from the waist opening to the first leg opening, at least one of the mating fastening components releasably connected to at least one of the fastening components on one of the front and back panels; and

a second side panel including a substrate and at least two mating fastening components extending from the waist opening to the second leg opening, at least one of the mating fastening components releasably connected to at least one of the fastening components on one of the front and back panels;

wherein each of the first and second side panels has a linear waist edge, a leg edge at least a portion of which is curved, and an average length dimension measured parallel to a longitudinal axis that is at least 20 percent of an overall length dimension of the chassis measured parallel to the longitudinal axis.